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THE NATURAL HISTORY OF ANCIENT VINLAND AND ITS GEOGRAPHIC SIGNIFICANCE*

In the sagas recounting the discovery and exploration by the Norsemen, during the eleventh century, of regions to the southeast of Greenland, whence the Norsemen sailed, three geographic areas were specially designated: Helluland, a rocky and treeless, or by some accounts an ice-mountain area, with many Arctic foxes; Markland, a less mountainous country with forests; and Vinland, south of Markland or in the southern part of Markland.

The name Vinland or Wineland the Good, derived from the finding of *vinber* (literally, wineberry) has been applied by various students of the sagas to regions as remote as Florida and even Greenland itself, while by Nansen it is maintained that, in so far as they mention wineberries and wheat, the sagas are purely mythological. Although the sagas contain much that is purely mythological, the matter-of-fact accounts of the voyages are so direct and without embellishment as to indicate that in the main they are trustworthy historical records; and a study of all the objects of natural history mentioned in them indicates that, when properly identified, they group themselves into a mass of data thoroughly consistent with the geographic account and the one astronomical note.

The principal items coming into consideration are:

VINBER. By all interpretations this is equivalent to wineberry, grape, or *Vitis*; and the natural impulse has been to say that *grapes* in their most exact sense were intended. In America no grapes occur north of southern New Brunswick, thus delimiting Vinland on the north. But in the Middle Ages, the term *grape* and its equivalents, *Vitis*, wineberry, etc., were loosely used by northern writers for any rounded juicy fruit, and even for vines with dry fruits. In Vinland the *vinber* were gathered in winter and grew "wherever there was hilly ground," from which the conclusion is drawn (after examining the claims of twenty-six different fruits which in the Middle Ages were called *grape*) that the Norsemen had in mind not the true southern grape, but the mountain cranberry, *Vaccinium Vitis-Idæa*, which covers the barren hills of Labrador and Newfoundland and is gathered in winter and spring.

MASUR. Commonly interpreted as bird's-eye maple, a form of rock maple, which does not extend northward to Newfoundland. Investigation shows that the *masur* of the Scandinavians is a burl or knob growing on birch trees and used for making bowls. Birch trees extend north to latitude 58° on the Labrador coast.

HVEITI (WHEAT). Long thought to be Indian corn or wild rice, both essentially southern plants; but neither of these look like wheat. On the coast from Iceland and Baffin Land to eastern Maine is a grass closely simulating wheat

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and used by the Icelanders as a source of grain. This is strand wheat, *Elymus arenarius*.

FORESTS (MARKLAND). In Markland the Norsemen first came to forests. The northern limit of forests in eastern America is at latitude 58° on the Labrador coast.

BEAR. The Norsemen killed "a bear." To Icelanders and Greenlanders that "is as much as to say a Polar Bear."

EIDER DUCKS. On an island eider ducks were nesting. These are essentially northern birds, perfectly familiar to the Norsemen.

WHALE. They killed a whale, the flesh of which made them all ill. The meat of most whales is good, but one species, the bottlenose whale, has fat which is highly purgative. This species extends from southern Greenland to the Grand Banks, but is very rare on the New England coast (only five records from New England waters).

SKRÆLLINGS. The natives of Vinland were described as using skin-canoes, the characteristic boats of the Eskimo. Other points indicate Eskimo, who reached their southern limit in Newfoundland and on the southern coast of the Labrador Peninsula.

"EYKT" AND "DAGMAL." The shortest day in winter the sun had "eykt" position and "dagmal" position. These observations worked out have indicated, according to varying interpretations, latitudes from 49°–58°. Those who try to localize Vinland in Nova Scotia or New England have been forced to insist that an error of 5° or 10° must be allowed in these observations.

MOUNTAINS. Vinland was a mountainous region. To Icelanders and Greenlanders the 600-foot hills of the coast of Nova Scotia and Massachusetts would not appeal as mountains. The southernmost high mountains on our coast are the Long Range of Newfoundland; and on the eastern coast of Labrador mountains are said to reach altitudes of 4,000–6,000 feet.

To summarize: The significant point is the fact that, if we accept the old interpretations of *vinber*, *masur*, and *hveiti* as grape, maple, and wild rice, only by the greatest distortion of the statements in the sagas can we bring into coincidence with them other natural features of the region: the Polar bear, the Skrællings, the latitude and the mountains. If, however, the newer interpretation is admitted, that mountain cranberries, birch trees and strand wheat were what the Norsemen really saw in Markland and Vinland, it will be noted that in Newfoundland and Labrador every one of the natural features is satisfied. It is accordingly clear, if we are to search with assurance for traces of the ancient Vinland settlement, that we must visit the coasts of those northern lands; and the strongest efforts should be concentrated upon the Northern Peninsula of Newfoundland, the region of the Straits of Belle Isle, and the region of Hamilton Inlet.

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